We claim:

1.) An integrated circuit package, comprising:

a semiconductor die;

an organic support structure; and

an adhesive tape disposed between the organic support structure and the semiconductor die, wherein the adhesive tape comprises at least one adhesive selected from the group consisting essentially of pressure sensitive adhesives, thermoplastic adhesives, and thermoset adhesives.

2.) The integrated circuit package of claim 1, wherein the adhesive tape is a single adhesive layer.

3.) The integrated circuit package of claim 1, wherein the adhesive tape is a multi-layer tape.

4.) The integrated circuit package of claim 3, wherein the adhesive tape comprises:

a first adhesive layer adjacent to the organic support structure;

a second adhesive layer adjacent to the semiconductor die; and

a carrier layer intermediate the first and second adhesive layers.

5.) The integrated circuit package of claim 4, wherein the first adhesive layer has a first coefficient of thermal expansion substantially identical to that of the organic support structure.

6.) The integrated circuit package of claim 5, wherein the second adhesive layer has a second coefficient of thermal expansion substantially identical to that of the semiconductor die.

7.) An integrated circuit package, comprising:

a semiconductor die;

an organic support structure; and

an adhesive tape disposed between the organic support structure and the semiconductor die, wherein the adhesive tape is comprised of a pressure sensitive adhesive.

8.) An integrated circuit package, comprising:

a semiconductor die;

an organic support structure; and

an adhesive tape disposed between the organic support structure and the semiconductor die, wherein the adhesive tape is comprised of a thermoplastic adhesive.

9.) An integrated circuit package, comprising:

a semiconductor die;

an organic support structure; and

an adhesive tape disposed between the organic support structure and the semiconductor die, wherein the adhesive tape is comprised of a pressure activated, thermoset adhesive.

10.) An integrated circuit package, comprising:

a semiconductor die;

an organic support structure; and

an adhesive tape disposed between the organic support structure and the semiconductor die, wherein the adhesive tape is comprised of a thermoset adhesive.

11.) An integrated circuit package, comprising:

a semiconductor die;

an organic support structure having a die attach area for receiving the die; and

an adhesive tape disposed between the die attach area and the semiconductor die, wherein the adhesive tape comprises:

a first adhesive layer adjacent to the organic support structure;

a second adhesive layer adjacent to the semiconductor die; and

a carrier layer intermediate the first and second adhesive layers.

12.) The integrated circuit package of claim 11, wherein the first and second adhesive layers are comprised of a pressure activated material.

13.) The integrated circuit package of claim 11, wherein the first adhesive layer has a first coefficient of thermal expansion substantially identical to that of the organic support structure.

14.) The integrated circuit package of claim 11, wherein the second adhesive layer has a second coefficient of thermal expansion substantially identical to that of the semiconductor die.

15.) The integrated circuit package of claim 11, wherein the first and second adhesive layers are comprised of a thermoset material.

16.) The integrated circuit package of claim 11, wherein the first and second adhesive layers are comprised of a thermoplastic material.

17.) The integrated circuit package of claim 11, wherein the first and second adhesive layers are comprised of a pressure activated, thermoset material.

18.) The integrated circuit package of claim 11, wherein the carrier layer is comprised of a polyimide film.

19.) The integrated circuit package of claim 11, wherein the organic support structure is a PCB substrate.

20.) An integrated circuit package, comprising:

a semiconductor die having a face side and a back side wherein the face side comprises a plurality of bond pads;

an organic substrate having a first side and a second side, the first side having a die attach area for receiving the die and wherein the die attach area includes an aperture; and

an adhesive tape disposed between the die attach area and the semiconductor die, wherein the adhesive tape comprises:

a first adhesive layer adjacent to the organic support structure;

a second adhesive layer adjacent to the semiconductor die; and

a polyimide carrier layer intermediate the first and second adhesive layers.

21.) The integrated circuit package of claim 20 wherein the first and second adhesive layers comprise a pressure activated, thermoset material.

22.) The integrated circuit package of claim 21 wherein the die attach area is recessed relative the first side.

23.) The integrated circuit package of claim 22 wherein the adhesive tape is disposed in two strips on either side of the aperture.

24.) The integrated circuit package of claim 23 wherein the second side of the organic substrate additionally comprises:

a plurality of lead connections located proximate the aperture; and

means for interconnecting the circuit package.

25.) The integrated circuit package of claim 24 wherein the interconnecting means is a BGA located on the second side of the organic substrate.

26.) An integrated circuit package, comprising:

a semiconductor die having a face side and a back side wherein the face side comprises a plurality of bond pads;

an organic substrate having a first side and a second side, the first side having a recessed die attach area for receiving the die and wherein the die attach area includes an aperture, the second side having: a plurality of lead connections located proximate the aperture; and a BGA for interconnecting the circuit package; and

an adhesive tape disposed between the die attach area and the semiconductor die, the tape forming two strips, one on either side of the aperture, wherein the adhesive tape comprises:

a first adhesive layer adjacent to the organic support structure;

a second adhesive layer adjacent to the semiconductor die, wherein the first and second adhesive layers comprise a pressure activated, thermoset material; and

a polyimide carrier layer intermediate the first and second adhesive layers.

27.) The integrated circuit package of claim 26 wherein the bond pads on the die face side are connected to the lead connections by a series of bond wires passing through the aperture.

28.) The integrated circuit package of claim 27 further comprising an encapsulating material over the bond pads, bond wires, lead connections, and a portion of the substrate.

29.) The integrated circuit package of claim 28 wherein the encapsulating material comprises a curable glob-top.

30.) The integrated circuit package of claim 29 wherein the organic substrate is a PCB substrate.

31.) An integrated circuit package, comprising:

a semiconductor die having a face side and a back side wherein the face comprises a plurality of bond pads;

a PCB substrate having a first side and a second side, the first side having a die attach area for receiving the die and the second side having:

a plurality of lead connections electrically connected to the bond pads; and

a BGA providing external electrical connection to the package;

an adhesive tape disposed between the die attach area and the semiconductor die, wherein the adhesive tape comprises:

a first adhesive layer adjacent to the PCB substrate;

a second adhesive layer adjacent to the semiconductor die; and

a polyimide carrier layer intermediate the first and second adhesive layers; and

a receiving component providing the external electrical connection to the BGA.

32.) The circuit package of claim 31, wherein the first and second adhesive layers comprise a pressure activated, thermoset material.

33.) A system comprising:

a processor; and

a memory component operatively coupled to the processor comprising:

a semiconductor die;

an organic support structure; and

an adhesive tape disposed between the organic support structure and the semiconductor die, wherein the adhesive tape comprises at least one adhesive selected from the group consisting essentially of pressure sensitive adhesives, thermoplastic adhesives, and thermoset adhesives.

34.) A method of attaching a semiconductor die to an organic support structure, comprising:

selecting a two-sided adhesive tape having at least one adhesive selected from the group consisting essentially of pressure sensitive adhesives, thermoplastic adhesives, and thermoset adhesives;

affixing a first side of the two-sided adhesive tape to a surface of the organic support structure; and

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affixing a face of the semiconductor die to a second side of the adhesive tape.

35.) A method of attaching a semiconductor die to an organic support structure, comprising:

affixing a first side of a two-sided adhesive tape to a surface of the organic support structure, wherein the adhesive tape comprises a pressure sensitive adhesive; and

affixing a face of the semiconductor die to a second side of the adhesive tape.

36.) A method of attaching a semiconductor die to an organic support structure, comprising:

affixing a first side of a two-sided adhesive tape to a surface of the organic support structure, wherein the adhesive tape comprises a thermoset adhesive; and

affixing a face of the semiconductor die to a second side of the adhesive tape.

37.) A method of attaching a semiconductor die to an organic support structure, comprising:

affixing a first side of a two-sided adhesive tape to a surface of the organic support structure, wherein the adhesive tape comprises a thermoplastic adhesive; and

affixing a face of the semiconductor die to a second side of the adhesive tape.

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38.) A method of attaching a semiconductor die to an organic support structure, comprising:

affixing a first side of a two-sided adhesive tape to a surface of the organic support structure, wherein the adhesive tape comprises a pressure sensitive, thermoset adhesive; and

affixing a face of the semiconductor die to a second side of the adhesive tape.

39.) A method of attaching a semiconductor die to an organic support structure, comprising:

affixing a first side of a two-sided adhesive tape to a surface of the organic support structure, wherein the adhesive tape comprises a pressure sensitive, thermoset adhesive;

elevating the temperature to activate the first side of the adhesive tape;

applying pressure to the tape and organic support structure to laminate the adhesive tape to the organic support structure;

affixing a face of the semiconductor die to a second side of the adhesive tape;

elevating the temperature of the tape to activate the second side of the adhesive tape; and

applying pressure to the die and organic support structure to laminate the adhesive tape to the die.

40.) The method of claim 39 further comprising electrically connecting a plurality of bond pads on the die face with a plurality of lead connections on the organic support structure.

41.) The method of claim 40 wherein electrically connecting the bond pads to the lead connections comprises wire bonding bond wires to the bond pads and the lead connections.

42.) The method of claim 41 further comprising forming an encapsulating material around portions of the die and organic support structure.

43.) The method of claim 42 wherein the encapsulating material encapsulates the bond pads, bond wires, lead connections, and a portion of the die face and support structure.

44.) A method of attaching a semiconductor die to an organic support structure, comprising:

affixing a first side of a two-sided adhesive tape to a surface of the organic support structure, wherein the adhesive tape comprises a pressure sensitive, thermoset adhesive;

elevating the temperature of the tape to activate the first side of the adhesive tape;

applying pressure to the tape and organic support structure to laminate the adhesive tape to the organic support structure;

affixing a face of the semiconductor die to a second side of the adhesive tape;

elevating the temperature of the tape to activate the second side of the adhesive tape;

applying pressure to the die and organic support structure to laminate the adhesive tape to the die;

wire bonding bond wires to a plurality of bond pads on the die face with a plurality of lead connections on the organic support structure;

applying an encapsulating material over the bond pads, bond wires, lead connections, and a portion of the die face and support structure.

45.) The method of claim 44 wherein the encapsulating material comprises a curable glob-top formed by dispensing a viscous curable material.

46.) The method of claim 45 further comprising curing the encapsulating material.

47.) The method of claim 46 further comprising inverting the organic support structure and applying a second curable glob-top to a perimeter of a back side of the semiconductor die.

48.) The method of claim 47 further comprising curing the die and the organic support structure.

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49.) The method of claim 48 further comprising trimming the organic support structure to form a BGA package.

50.) The method of claim 49 further comprising electrically interconnecting the BGA package to a receiving component.

51.) A method for fabricating a semiconductor package comprising:

providing a semiconductor die having a face and a plurality of bond pads;

providing an organic support structure comprising a die attach area and a plurality of lead connections;

providing a two-sided adhesive tape intermediate the die and the organic support structure to bond the die thereto; and

attaching a first side of the adhesive tape to the die attach area of the organic support structure and a second side of the adhesive tape to the die face.

52.) The method of claim 51 further comprising applying heat to laminate the tape to the die and the organic support structure.

53.) The method of claim 52 further comprising applying pressure to laminate the tape to the die and the organic support structure.

54.) The method of claim 53 further comprising electrically connecting the bond pads to the lead connections.

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55.) The method of claim 54 wherein the electrical connection comprises connecting a series of bond wires to the bond pads and to the lead connections.

56.) The method of claim 55 further comprising applying a viscous material to cover the bond pads, lead connections, bond wires, and a portion of the organic support structure.

57.) The method of claim 56 wherein the viscous material is a curable glob-top.

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